

What is claimed is:

1. A method for operating a data initiator device in communicating with a data  
5 target device based on a plurality of data tag sets, the method comprising:  
designating a first set of at least one data tag for tagging data transfers between the  
data initiator device and the data target device;  
attaching a first data tag from the first set of at least one data tag to a first data  
transfer command directed to a first data transfer between the data initiator device and the  
10 data target device subsequent to the designation of the first set of at least one data tag for  
tagging data transfers;  
issuing the first data transfer command with the attached first data tag to the data  
target device;  
designating a second set of at least one data tag for tagging data transfers in lieu of  
15 the first set of at least one data tag in response to a detection of a first error associated  
with an execution of the first data transfer command;  
attaching a second data tag from a second set of at least one data tag to a second  
data transfer command directed to a second data transfer between the data initiator device  
and the data target device subsequent to the designation of the second set of at least one  
20 data tag for tagging data transfers; and  
issuing the second data transfer command with the attached second data tag to the  
data target device.
2. The method of claim 1, further comprising:  
25 re-designating the first set of at least one data tag for tagging data transfers in lieu  
of the second set of at least one data tag in response to a detection of a second error  
associated with an execution of the second data transfer command;  
attaching a third data tag from the first set of at least one data tag to a third data  
transfer command directed to a third data transfer between the data initiator device and  
30 the data target device subsequent to the re-designation of the first set of at least one data

tag for tagging data transfers; and

issuing the third data transfer command with the attached third data tag to the data target device.

5     3.     The method of claim 1, further comprising:

designating a third set of at least one data tag for tagging data transfers in response to a detection of a second error associated with an execution of the second data transfer command;

10     attaching a third data tag from the third set of at least one data tag to a third data transfer command directed to a third data transfer between the data initiator device and the data target device subsequent to the designation of the third set of at least one data tag for tagging data transfers; and

issuing the third data transfer command with the attached third data tag to the data target device.

15

4.     The method of claim 3, further comprising:

re-designating the first set of at least one data tag for tagging data transfers in lieu of the third set of at least one data tag in response to a detection of a third error associated with an execution of the third data transfer command;

20     attaching a fourth data tag from the first set of at least one data tag to a fourth data transfer command directed to a fourth data transfer between the data initiator device and the data target device subsequent to the re-designation of the first set of at least one data tag for tagging data transfers; and

25     issuing the fourth data transfer command with the attached fourth data tag to the data target device.

5.     The method of claim 3, further comprising:

30     designating a fourth set of at least one data tag for tagging data transfers in lieu of the third set of at least one data tag in response to a detection of a third error associated with an execution of the third data transfer command;

attaching a fourth data tag from the fourth set of at least one data tag to a fourth data transfer command directed to a fourth data transfer between the data initiator device and the data target device subsequent to the designation of the fourth set of at least one data tag for tagging data transfers; and

5           issuing the fourth data transfer command with the attached fourth data tag to the data target device.

6.       The method of claim 5, further comprising:

          re-designating the first set of at least one data tag for tagging data transfers in lieu  
10       of the fourth set of at least one data tag in response to a detection of a third error associated with an execution of the third data transfer command;

          attaching a fifth data tag from the first set of at least one data tag to a fifth data transfer command directed to a fifth data transfer between the data initiator device and the data target device subsequent to the re-designation of the first set of at least one data tag  
15       for tagging data transfers; and

          issuing the fifth data transfer command with the attached fifth data tag to the data target device.

7.       A signal bearing medium tangibly embodying a program of machine-readable  
20       instructions executable by a processor to perform operations to operate a data initiator device in communicating with a data target device based on a plurality of data tag sets, the operations comprising:

          designating a first set of at least one data tag for tagging data transfers for transferring data between the data initiator device and the data target device;

25       attaching a first data tag from the first set of at least one data tag to a first data transfer command directed to a first data transfer between the data initiator device and the data target device subsequent to the designation of the first set of at least one data tag for tagging data transfers;

          issuing the first data transfer command with the attached first data tag to the data  
30       target device;

designating a second set of at least one data tag for tagging data transfers in lieu of the first set of at least one data tag in response to a detection of a first error associated with an execution of the first data transfer command;

5 attaching a second data tag from a second set of at least one data tag to a second data transfer command directed to a second data transfer between the data initiator device and the data target device subsequent to the designation of the second set of at least one data tag for tagging data transfers; and

issuing the second data transfer command with the attached second data tag to the data target device.

10

8. The signal bearing medium of claim 7, wherein the operations further include:  
re-designating the first set of at least one data tag for tagging data transfers in lieu of the second set of at least one data tag in response to a detection of a second error associated with an execution of the second data transfer command;

15 attaching a third data tag from the first set of at least one data tag to a third data transfer command directed to a third data transfer between the data initiator device and the data target device subsequent to the re-designation of the first set of at least one data tag for tagging data transfers; and

issuing the third data transfer command with the attached third data tag to the data target device.

20

9. The signal bearing medium of claim 7, wherein the operations further include:  
designating a third set of at least one data tag for tagging data transfers in lieu of the second set of at least one data tag in response to a detection of a second error associated with an execution of the second data transfer;

25

attaching a third data tag from the third set of at least one data tag to a third data transfer command directed to a third data transfer between the data initiator device and the data target device subsequent to the designation of the third set of at least one data tag for tagging data transfers; and

30 issuing the third data transfer command with the attached third data tag to the data

target device.

10. The signal bearing medium of claim 9, wherein the operations further include:  
re-designating the first set of at least one data tag for tagging data transfers in lieu  
5 of the third set of at least one data tag in response to a detection of a third error associated  
with an execution of the third data transfer command;  
attaching a fourth data tag from the first set of at least one data tag to a fourth data  
transfer command directed to a fourth data transfer between the data initiator device and  
the data target device subsequent to the re-designation of the first set of at least one data  
10 tag for tagging data transfers; and  
issuing the fourth data transfer command with the attached fourth data tag to the  
data target device.
11. The signal bearing medium of claim 9, wherein the operations further include:  
15 designating a fourth set of at least one data tag for tagging data transfers in lieu of  
the third set of at least one data tag in response to a detection of a third error associated  
with an execution of the third data transfer command;  
attaching a fourth data tag from the fourth set of at least one data tag to a fourth  
data transfer command directed to a fourth data transfer between the data initiator device  
20 and the data target device subsequent to the designation of the fourth set of at least one  
data tag for tagging data transfers; and  
issuing the fourth data transfer command with the attached fourth data tag to the  
data target device.
- 25 12. The signal bearing medium of claim 11, wherein the operations further include:  
re-designating the first set of at least one data tag for tagging data transfers in lieu  
of the fourth set of at least one data tag in response to a detection of a third error  
associated with an execution of the third data transfer command;  
attaching a fifth data tag from the first set of at least one data tag to a fifth data  
30 transfer command directed to a fifth data transfer between the data initiator device and the

data target device subsequent to the re-designation of the first set of at least one data tag for tagging data transfers; and

issuing the fifth data transfer command with the attached fifth data tag to the data target device.

5

13. The signal bearing medium of claim 7, further comprising:

means for allocating the plurality of data tag sets to a data transfer protocol for conducting data transfers between the data initiator device and the data target device.

10 14. A data initiator device, comprising:

a processor; and

a memory storing instructions operable with the processor for operate a data initiator device in communicating with a data target device based on a plurality of data tag sets, the instructions being executed for:

15 designating a first set of at least one data tag for tagging data transfers for transferring data between the data initiator device and the data target device;

attaching a first data tag from the first set of at least one data tag to a first data transfer command directed to a first data transfer between the data initiator device and the data target device subsequent to the designation of the first set of at least one data tag for tagging data transfers;

20 issuing the first data transfer command with the attached first data tag to the data target device;

designating a second set of at least one data tag for tagging data transfers in lieu of the first set of at least one data tag in response to a detection of a first error

25 associated with an execution of the first data transfer command;

attaching a second data tag from a second set of at least one data tag to a second data transfer command directed to a second data transfer between the data initiator device and the data target device subsequent to the designation of the second set of at least one data tag for tagging data transfers; and

30 issuing the second data transfer command with the attached second data

tag to the data target device.

15. The data initiator device of claim 14, wherein the instructions further include:  
re-designating the first set of at least one data tag for tagging data transfers in lieu  
5 of the second set of at least one data tag in response to a detection of a second error  
associated with an execution of the second data transfer command;  
attaching a third data tag from the first set of at least one data tag to a third data  
transfer command directed to a third data transfer between the data initiator device and  
the data target device subsequent to the re-designation of the first set of at least one data  
10 tag for tagging data transfers; and  
issuing the third data transfer command with the attached third data tag to the data  
target device.

16. The data initiator device of claim 14, wherein the instructions further include:  
15 designating a third set of at least one data tag for tagging data transfers in lieu of  
the second set of at least one data tag in response to a detection of a second error  
associated with an execution of the second data transfer command;  
attaching a third data tag from the third set of at least one data tag to a third data  
transfer command directed to a third data transfer between the data initiator device and  
20 the data target device subsequent to the designation of the third set of at least one data tag  
for tagging data transfers; and  
issuing the third data transfer command with the attached third data tag to the data  
target device.

- 25 17. The data initiator device of claim 16, wherein the instructions further include:  
re-designating the first set of at least one data tag for tagging data transfers in lieu  
of the third set of at least one data tag in response to a detection of a third error associated  
with an execution of the third data transfer command;  
attaching a fourth data tag from the first set of at least one data tag to a fourth data  
30 transfer command directed to a fourth data transfer between the data initiator device and

the data target device subsequent to the re-designation of the first set of at least one data tag for tagging data transfers; and

issuing the fourth data transfer command with the attached fourth data tag to the data target device.

5

18. The data initiator device of claim 16, wherein the instructions further include:

designating a fourth set of at least one data tag for tagging data transfers in lieu of the third set of at least one data tag in response to a detection of a third error associated with an execution of the third data transfer command;

10 attaching a fourth data tag from the fourth set of at least one data tag to a fourth data transfer command directed to a fourth data transfer between the data initiator device and the data target device subsequent to the designation of the fourth set of at least one data tag for tagging data transfers; and

15 issuing the fourth data transfer command with the attached fourth data tag to the data target device.

19. The data initiator device of claim 18, wherein the instructions further include:

re-designating the first set of at least one data tag for tagging data transfers in lieu of the fourth set of at least one data tag in response to a detection of a third error  
20 associated with an execution of the third data transfer command;

attaching a fifth data tag from the first set of at least one data tag to a fifth data transfer command directed to a fifth data transfer between the data initiator device and the data target device subsequent to the re-designation of the first set of at least one data tag for tagging data transfers; and

25 issuing the fifth data transfer command with the attached fifth data tag to the data target device.

20. The data initiator device of claim 14, further comprising:

means for allocating the plurality of data tag sets to a data transfer protocol for  
30 conducting data transfers between the data initiator device and the data target device.